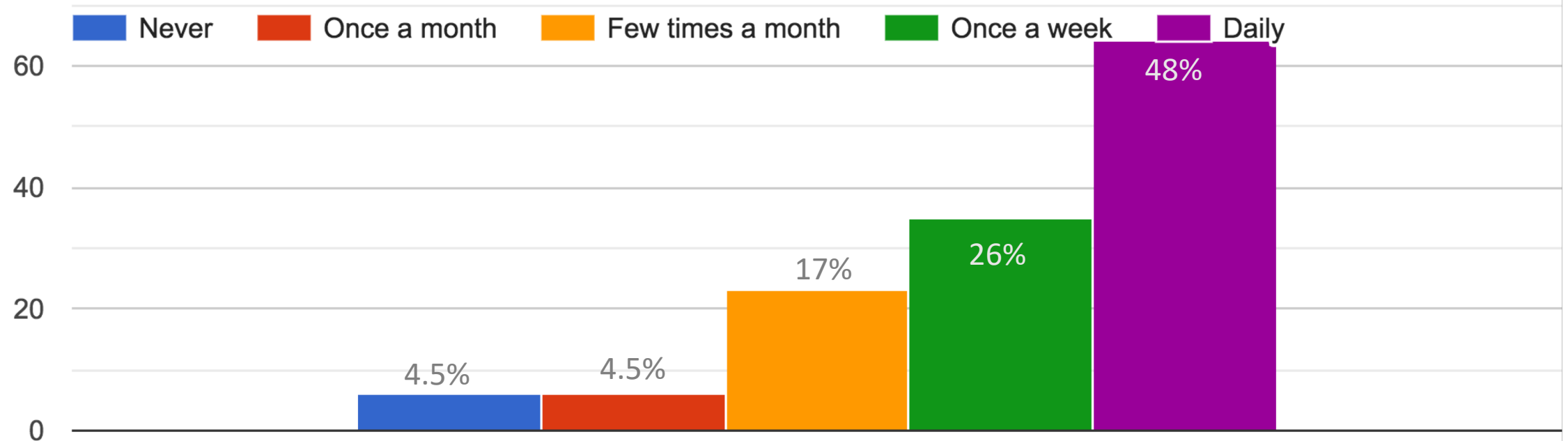
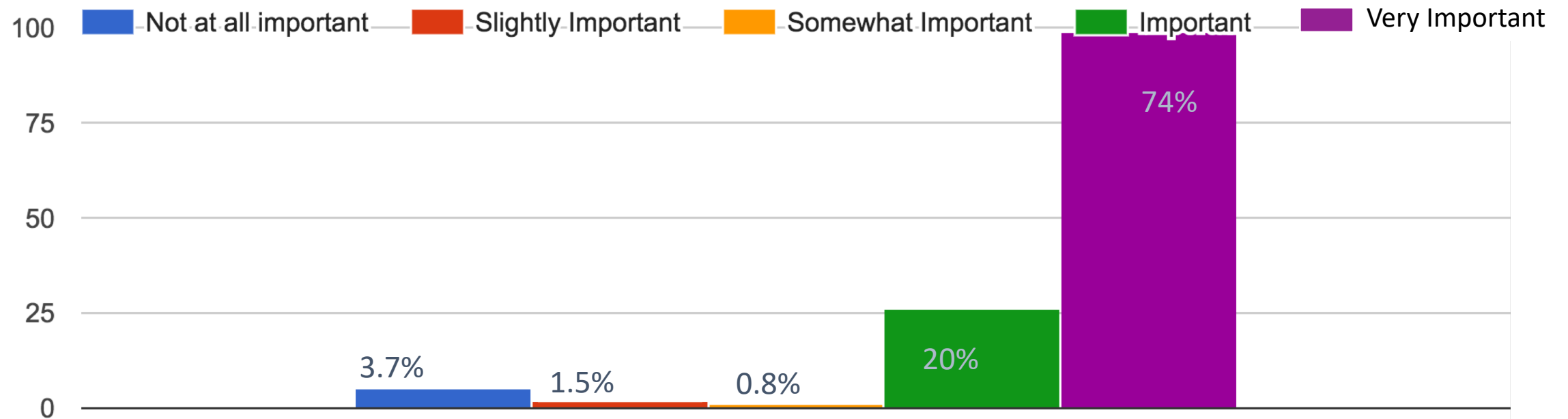


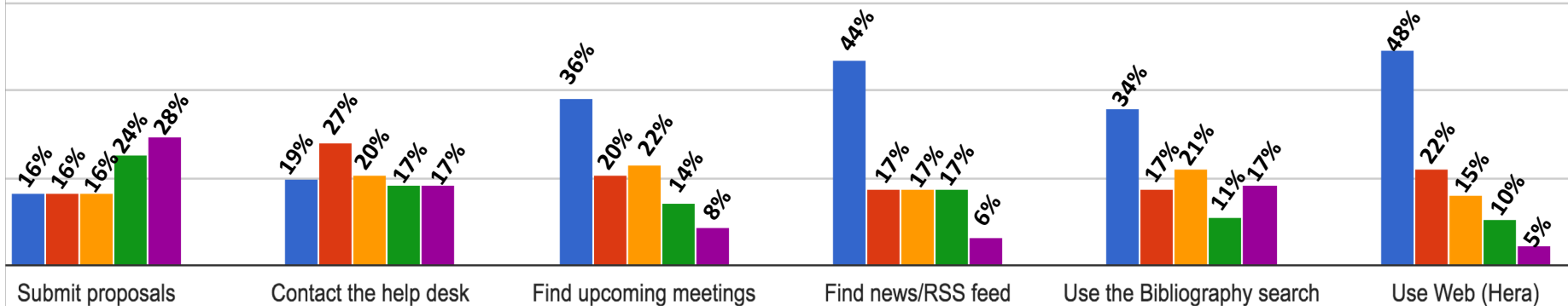
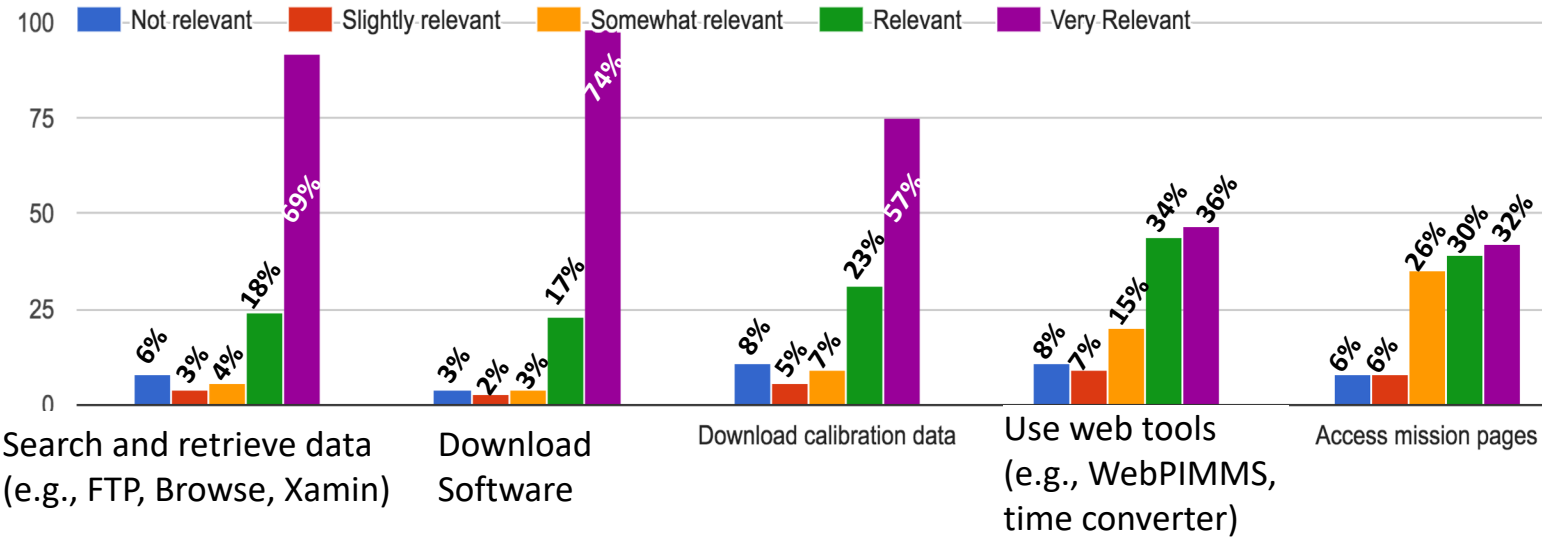
# 1. How often have you used HEASARC services in the past 12 months?



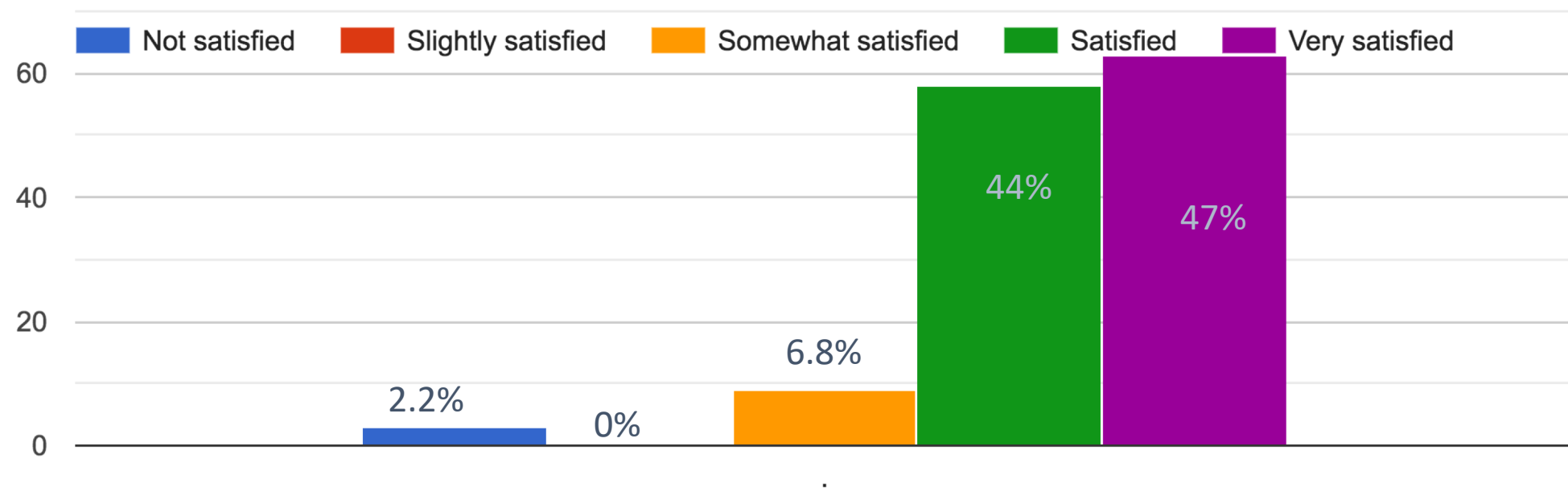
## 2. How important are HEASARC services to your research?



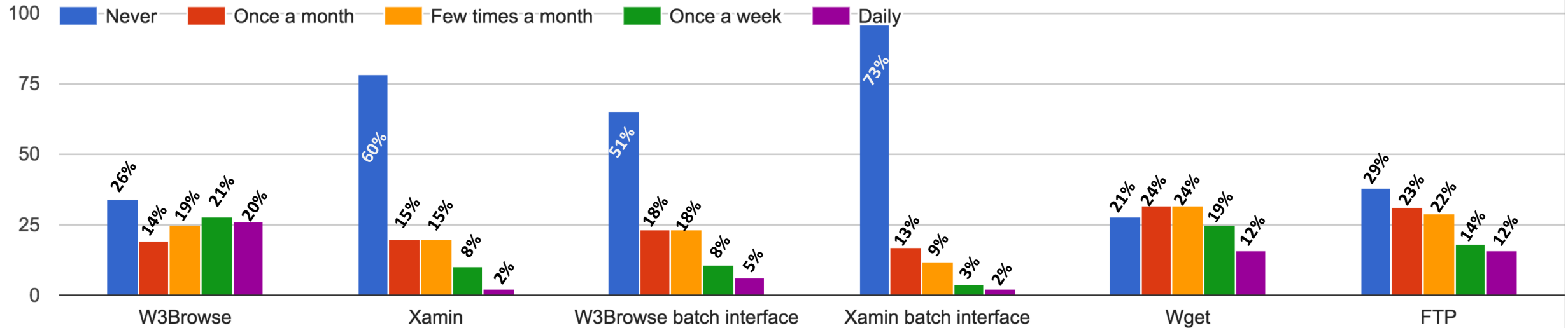
### 3. Please rank the relevance of the following services to your research



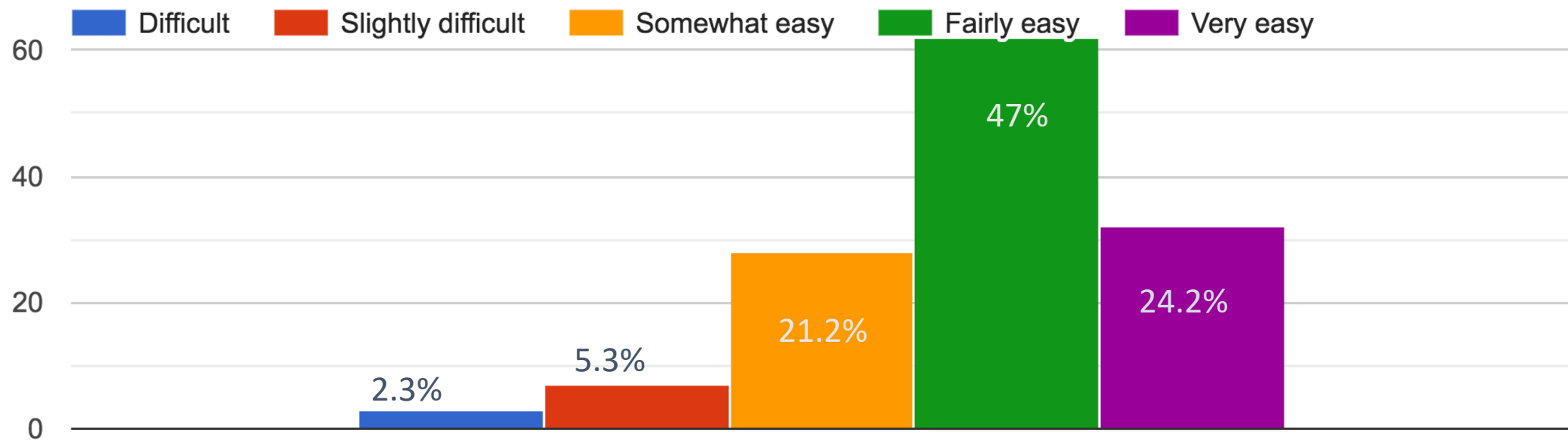
#### 4. How satisfied are you overall with the HEASARC services?



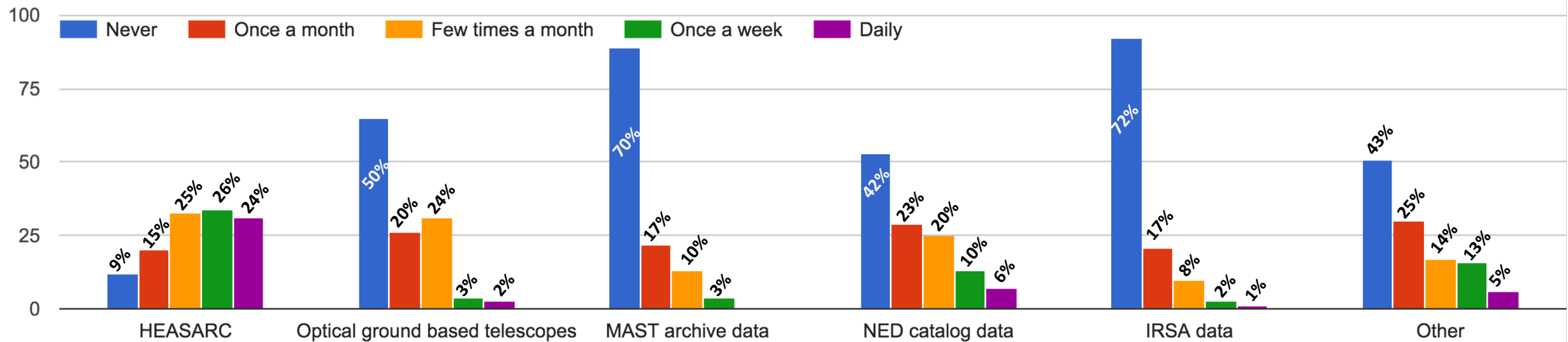
## 5. How often do you use these HEASARC interfaces or protocols?



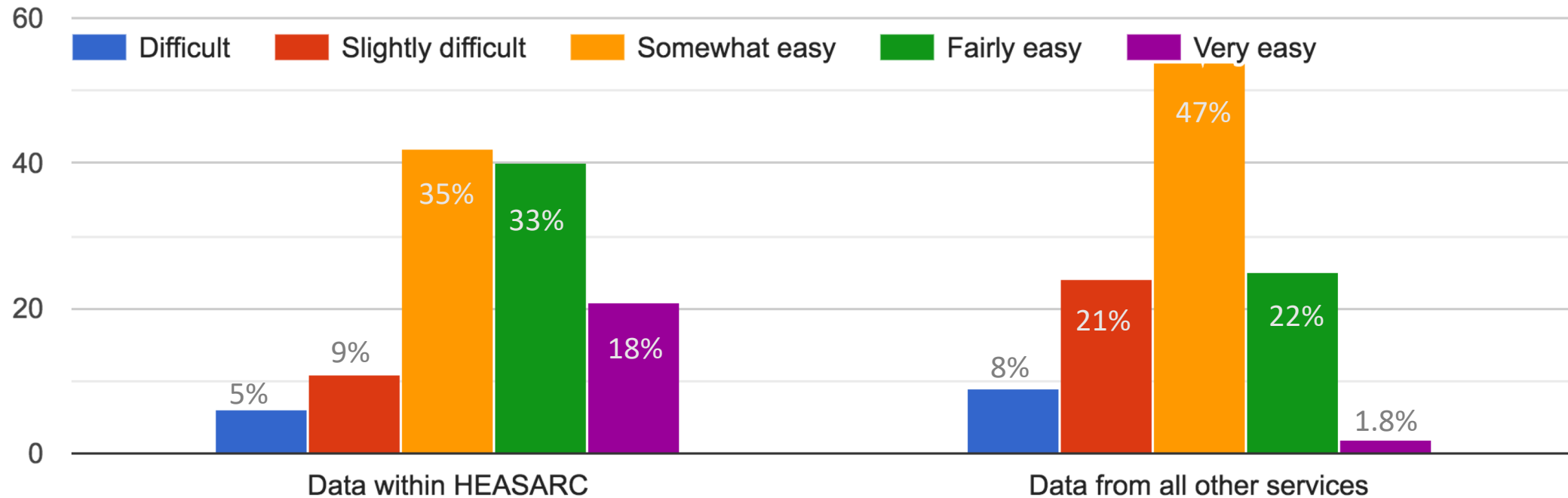
## 6. How do you rate the process to search and download data at the HEASARC?



## 7. In your research, how often do you combine different data sets from the following sources or archives?

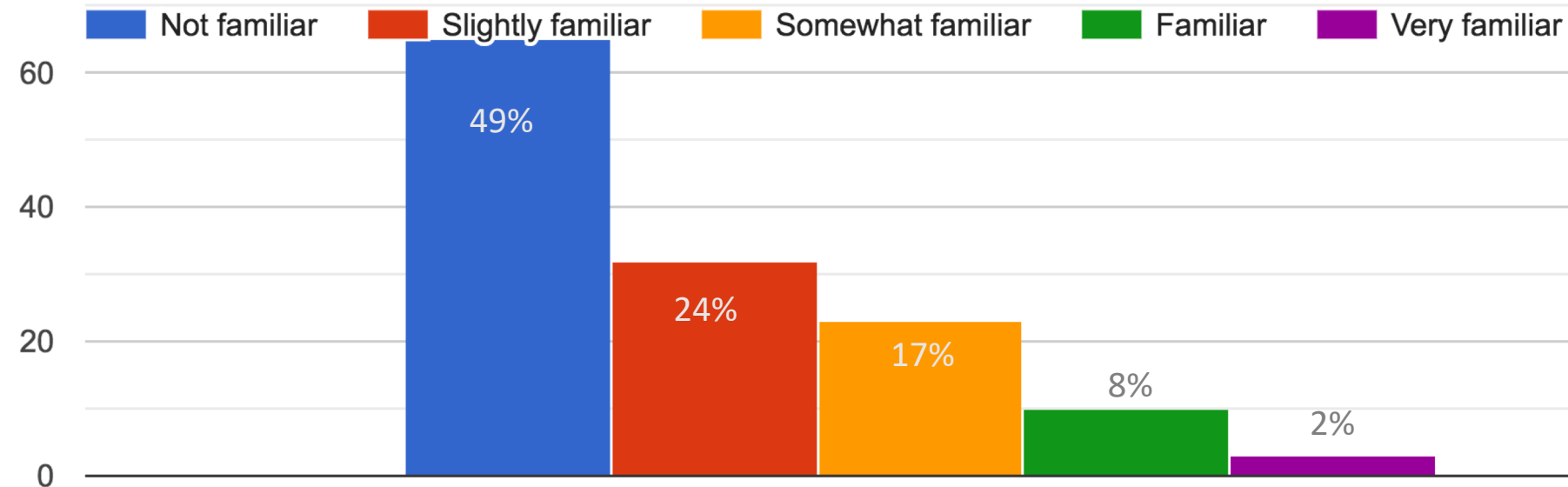


## 8. How do you rate the process of combining the different data sets?

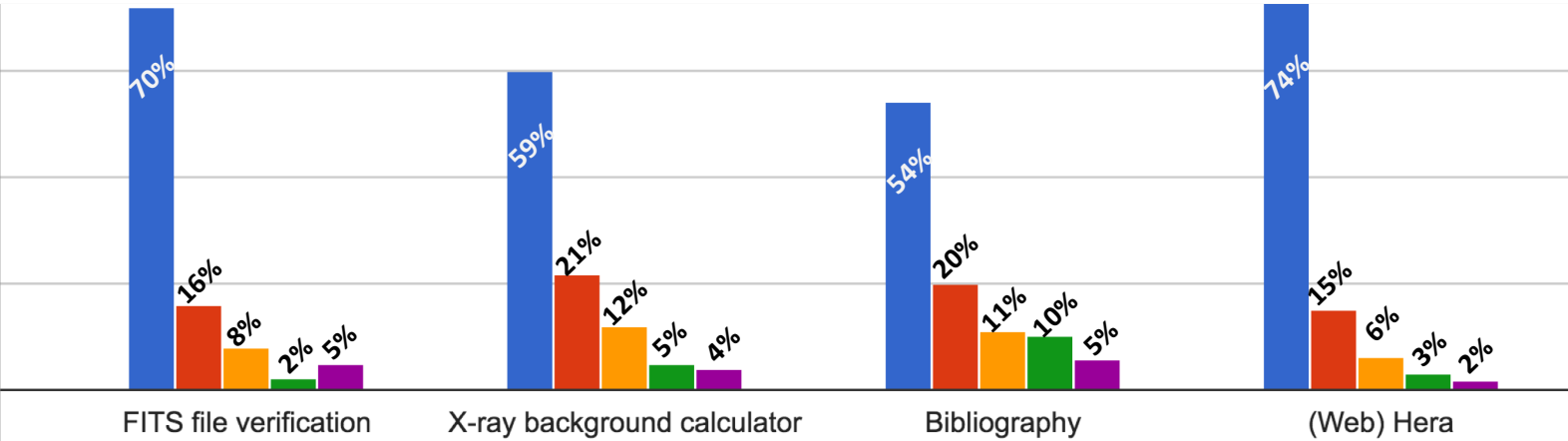
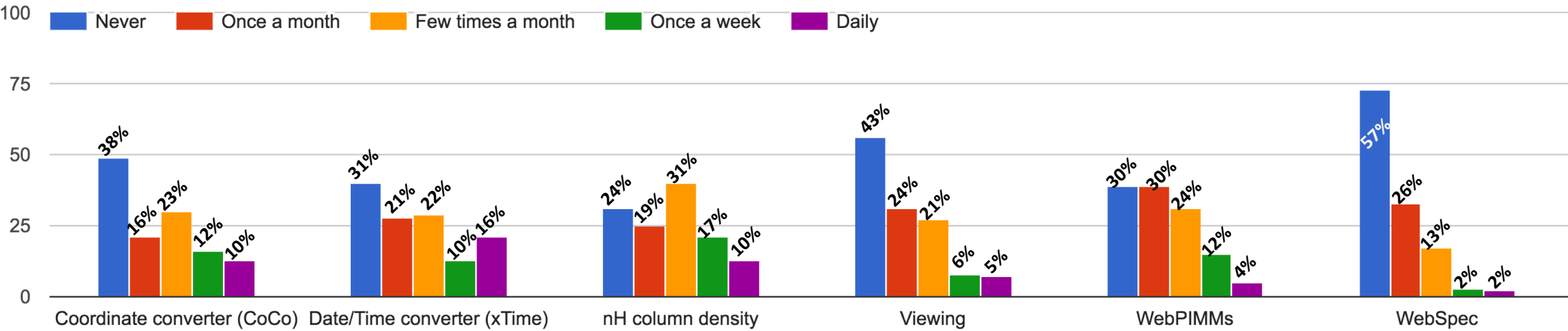




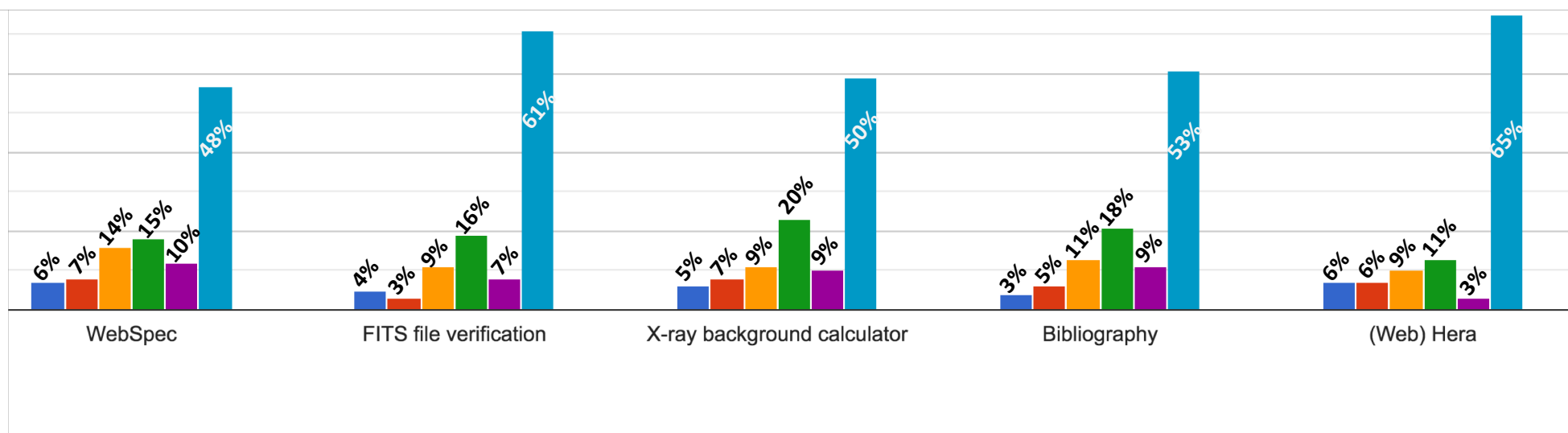
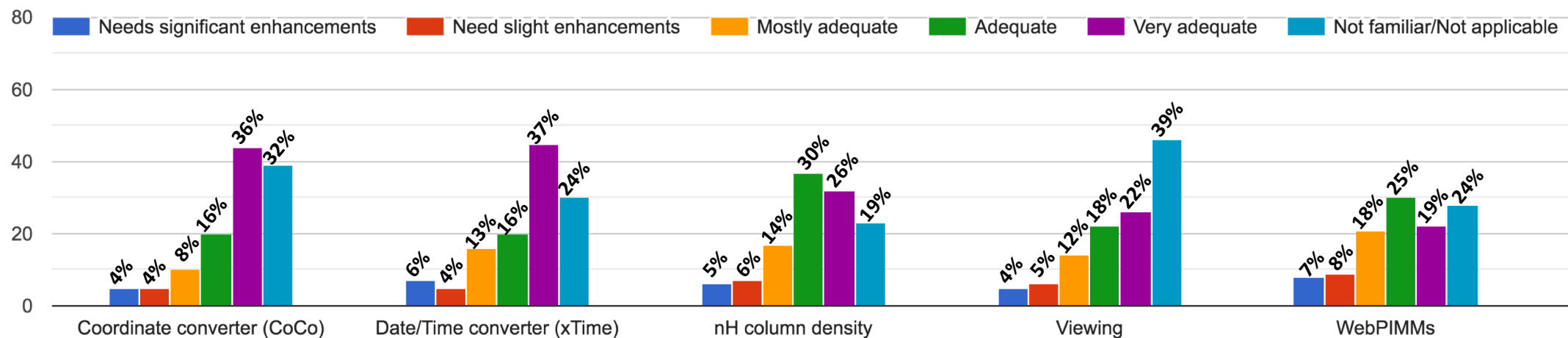
## 9. How familiar are you with Virtual Observatory (VO) interfaces to HEASARC and other NASA data archives?



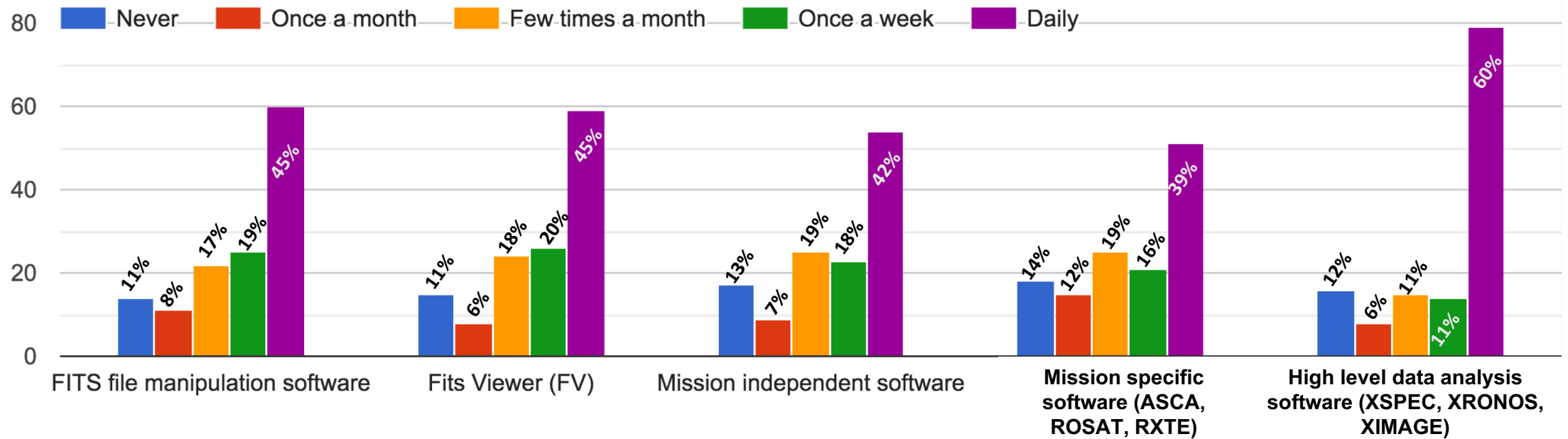
10. How often do you use the following HEASARC online tools?



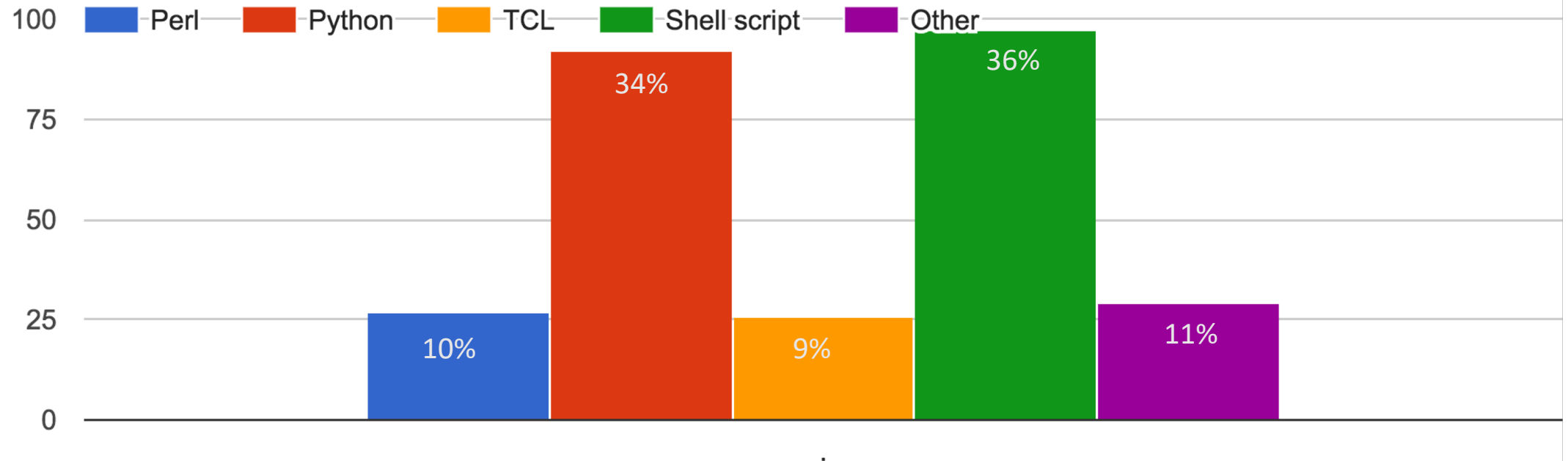
## 11. Are the services adequate or do they need enhancements?



## 12. What HEASARC-provided software are you using in your research?

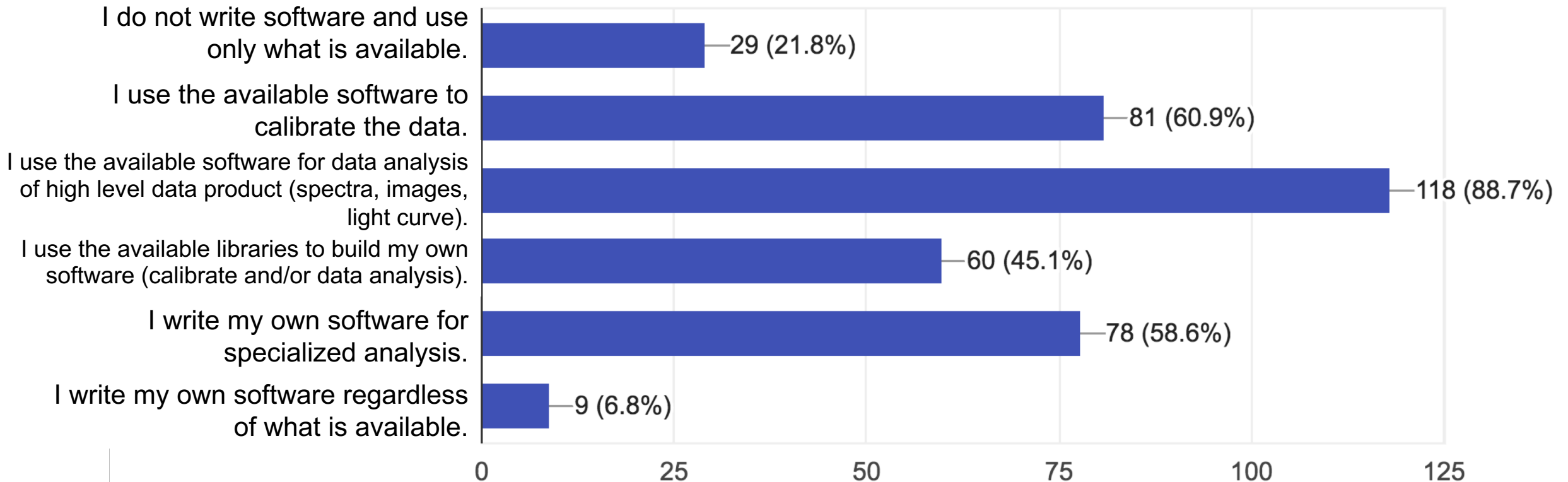


13. Which of the following scripting language(s) (not proprietary) do you use?

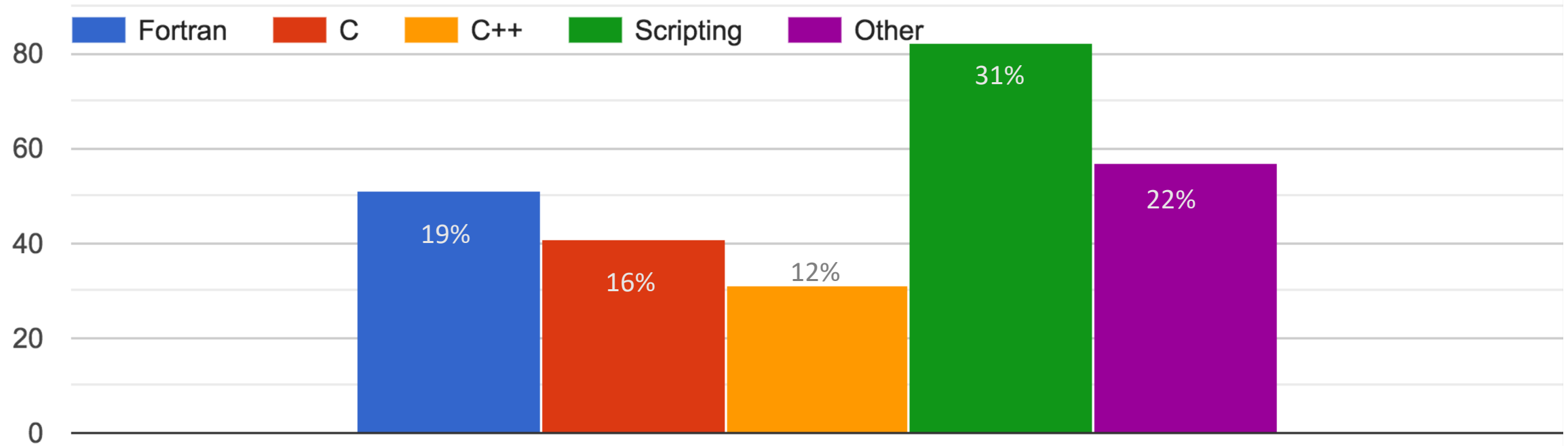


## 14. Which is/are your approach(es) to data analysis software?

133 responses

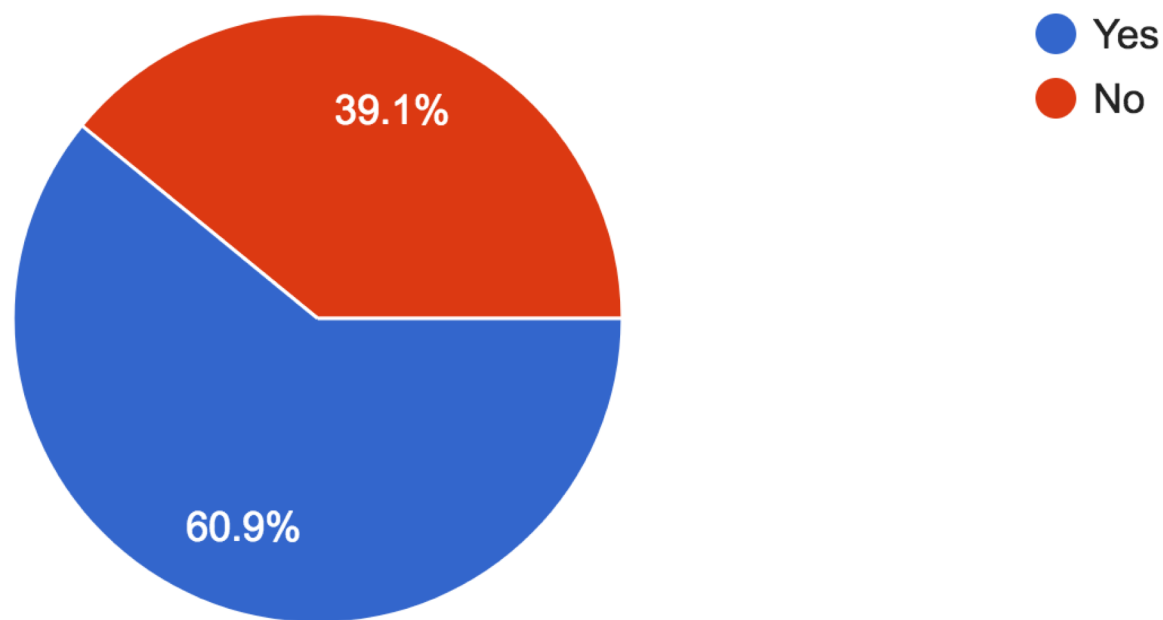


## 15. Which of the following software languages do you use?



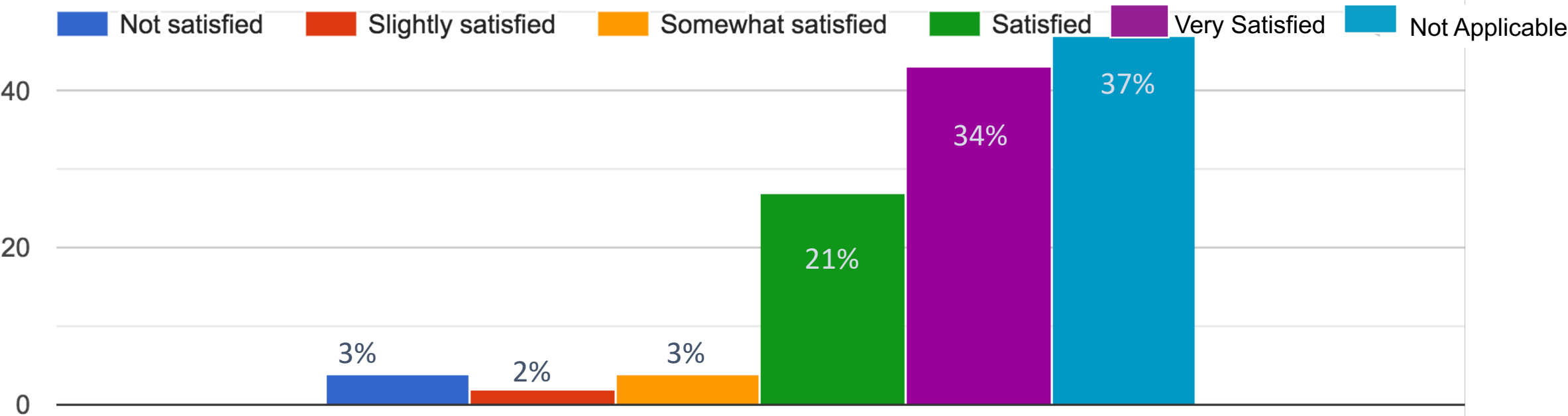
## 16. Have you ever contacted the HEASARC help desks (for either software or data assistance)

133 responses





# 17. Were the problems resolved to your satisfaction by the help desk?



## 18. Please enter any additional comments: e.g., details on questions above, future HEASARC implementation, or any other comments that you would like to provide. (1/5)

HEASARC provides indispensable data and tools for my research in the field of X-ray astronomy! The browse facility for data could perhaps be improved in user-friendliness. For instance, 1-s resolution light curves of targeted objects would be useful for me, and quick-look spectra (with response files) and rough upper limits in case of a non-detection.

None, I am satisfied with what is available now

HEASARC can be very slow. The website often takes quite some time to load.

Everything at HEASARC is simply amazing.

I always use the traditional W3 archive search - the Xamin interface is not user-friendly.

I would stop supporting XRONOS, which is outdated and prone to give erroneous results as it hasn't been kept up to date with developments in the field. I also think that the transition attempt to Xanim was a mistake since that interface makes work much more difficult than W3browse (so thanks for not switching the latter off). But if you need to save money, these areas are where you could and where - I believe - you would not lose anything. Concerning the N\_H-tool, it requires significant updating as new surveys have become available

Please don't abandon C++ support. HEASOFT X-ray analysis software needs to be brought up to the standard of Chandra's CIAO. Documentation all around needs improvement.

UI

## 18. Please enter any additional comments: e.g., details on questions above, future HEASARC implementation, or any other comments that you would like to provide. (2/5)

GUIs of software (e.g. FV) is several decades out of style... Functionality is fine, but software feels out-of-date... For FV in particular it doesn't help that the Windows version is poorly supported and stuck in an much older version.

Please continue the service!

I am very interested in the development of astroquery.heasarc! It would be so great to quickly browse what data is available for a given source or spatial coordinate range and filter/mask it in my existing python notebooks, and combine that data with other missions within my existing python analysis framework.

none.

somethimes the manuals are quite difficult to understand

Download speed often slow

I wish NASA software were available on a version control platform like GitHub that would allow members of the community to contribute to software products like XSPEC in a principled way. For example, I have never managed to install heasoft without having to patch some of the heasoft scripts, and often I would have liked to submit a bug report or patch for the OS I was using. But the current structure for feedback makes that opaque to impossible. I think NASA is depriving itself of valuable community resources by seeing itself as a software creator and the community merely as users.

It is getting increasingly difficult to get HEASoft installed and running on different flavors of linux. All required/expected libraries should be included inside the distributed HEASoft, even if this makes the file size much larger.

updated mekal and vmekal codes should be included in xspec

## **18. Please enter any additional comments: e.g., details on questions above, future HEASARC implementation, or any other comments that you would like to provide. (3/5)**

I find the use of PGplot with the Xronos package difficult and with not enough options to edit the lightcurve plots, so I have to use python to plot them instead. I would use lcurve if the available PGplot options were explained with more clarity and in more detail.

The HEASARC is an excellent resource for X-ray analysis. Keep up the legacy Alan!

I would be better if HEASARC makes a transition from older programming languages like TCL and Fortran to Python. This will help current age researchers to modify and tailor the current HEASARC software to their needs.

Both these points are probably just due to my ignorance but, firstly, I remember reading something about a specialized FITS file compression tool that works better than gzip/existing compressions, if so how come most files are provided as .fits.gz (presumably) not using this FITS compression feature? I ask as for CFITSIO throws a segfault for very large gzipped files.

Secondly, is feasible for the HEASARC archive to be provided via a faster and more modern protocol than FTP? A few options exist, typically used by geneticists and particle scientists who deal with huge volumes of data, but it would be nice to have a faster option when downloading the entire observation archive for a mission.

when I download the data (for example, NICER data) use the script supported by Browser, it is very slow. I hope to prove this problem.

It would be very useful to have multi-mission schedule viewer as most missions make available their long and short term scheduling information.

## 18. Please enter any additional comments: e.g., details on questions above, future HEASARC implementation, or any other comments that you would like to provide. (4/5)

totally good

1. The speed of the HEASARC website (especially during data downloads) is slow (would be happy if enhanced). 2. The new Xamin interface could be simplified. It's a bit confusing.

I also use much INTEGRAL S/W not provided by HEASARC

HEASARC is an excellent tool for data analysis. I regularly use Xspec for spectra; the tools available for NuSTAR, Suzaku, and Swift data analysis and consistently update the calibrations as I'm analyzing data. The only thing I think could enhance HEASARC even further are possible further enhancements to WebPIMMS to include more complicated models including high-energy cutoffs.

In the HEASARC online tool, date and time converter (i.e xTime), could you provide a facility or script to convert a batch of time units to convert into another units. Presently it's only possible to convert a single entry at a time. A facility of batch conversion would have been better.

Utterly invaluable especially the compiled tools software and xspec to build modify and run locally

**18. Please enter any additional comments: e.g., details on questions above, future HEASARC implementation, or any other comments that you would like to provide. (5/5)**

Keep up your AWESOME work !

updated mekal and vmekal codes should be included in xspec

Why comment-out the CFITSIO Windows DLLs?

keep softwares compatible

make software compatible

Add IRAF and CASA software in Web HERA

## 19. Please enter any message that you would like to convey to the Decadal survey for the 2020s regarding the astrophysics archives (1/3)

I feel NASA security requirements are making public data access much more difficult with no increase in security or integrity.

HEASARC is simply great

Do not be pulled into virtualisation of all services. Actual source code and continuing open codes and open curated standards provided as reference to a scattering community is a vital anchor point role.

do you need

The HEASARC is a key component of the US astrophysics portfolio and must be maintained to ensure longterm and immediate access to federally funded research data.

The maintenance and existence of these archives should be guaranteed for future because these become increasingly more important.

HEASARC is absolutely pivotal to my research!

The HEASARC is an incredibly useful and important archive.

The ability to have data readily available for a variety of satellites past and present is invaluable!

The HEASARC is absolutely vital to my research in X-ray astronomy. I wish it had more funding to support its activities.

HEASARC is one of the most important services provided by NASA to the community.

The archives are crucial facilities that should be funded as such.

please keep it going.

## 19. Please enter any message that you would like to convey to the Decadal survey for the 2020s regarding the astrophysics archives (2/3)

I'll repeat my statement from above: I wish NASA software were available on a version control platform like GitHub that would allow members of the community to contribute to software products like XSPEC in a principled way. For example, I have never managed to install heasoft without having to patch some of the heasoft scripts, and often I would have liked to submit a bug report or patch for the OS I was using. But the current structure for feedback makes that opaque to impossible. I think NASA is depriving itself of valuable community resources by seeing itself as a software creator and the community merely as users.

Astrobulletine about black hole,dark matter,climate change,nuclear and ballistic missile test.

Provide ways of analysing old data.

Please continue working!!!

The users of HEASARC need an online forum where discussions regarding the intricacies of data, software and high energy astrophysics can be discussed with peers and experts in the field. This will maximize the use of the available resources on HEASARC.

The HEASARC is an valuable resource both to transmit new data to scientists and as an archive of historical data. While the system can be difficult to use at times, this results from the desire to maintain valuable data sets from older observatories that may not be operating any more. Improving the HEASARC would probably require a substantial investment in additional FTEs to manage any "modernization" of the HEASOFT FTOOLS (i.e. making the tools more open source / transparent / increasing the cadence of updates for users) or providing more sophisticated data discovery (i.e. something like ESA Sky). Maintaining the current level of support and planning for the future is essential for the high energy astrophysics community.



## 19. Please enter any message that you would like to convey to the Decadal survey for the 2020s regarding the astrophysics archives (3/3)

Archives are fundamental for any kind of research. Maintaining them, for both present and past missions, is mandatory. It is fundamental, especially for past missions, where the software (for the data reduction) is no more available (or if it is not possible anymore to install on present operating systems) to make available products (light curves, spectra, images) that the user can trust (scientifically).

HEASARC is essential to my research and many of my colleagues'. It bridges the gap between past mission (archived data, softwares, and calibration files), the present (day-to-day use of software tools), and the future; in particular, we are using and/or depending on HEASARC tools and archives to build data analysis pipeline for future X-ray mission, e.g. SVOM and Athena.

HEASARC has been extremely useful to develop X-ray astronomy research in India. Easy accessibility of archival data, software tools and documentation has enabled numerous researchers throughout the globe.

This central archive is solely responsible for the success and spread of high energy astrophysics. I wish optical and radio astronomers emulated them!

no , thanks!

Downloading data above 2GB directs us to download via wget by producing download script. Downloading via script is not very convenient as download speed is limited. Also, when the internet connection not very strong the download stops in the middle and re-running the script does not download the complete file after the lost in connection.

Could you please make your services more accessible to non-professionals? More tutorials and more examples? Thank you.

Open source technology and software should be implemented more and more.

## 20. What is your primary occupation/role?

126 responses

